

# SPAIN

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Spain, which has some of the most mineralized territory in Western Europe, was a significant European producer of nonferrous and precious metals. The main polymetallic deposits, from west to east, include Tharsis, Scotiel, Rio Tinto, and Aznalcollar. In terms of value of mine output of metallic and nonmetallic minerals and quarry products, Spain was one of the leading European Union (EU) countries. Consequently, it had one of the highest levels of self-sufficiency with respect to mineral raw materials among the EU members. Of the approximately 100 mineral products mined, only about 18 were produced in significant quantities—bentonite, copper, fluorspar, glauconite, gold, iron, lead, magnetite, mercury, potash, pyrites, quartz, refractory argillite, sea and rock salt, sepiolitic salts, tin, tungsten, and zinc.

Spain has a long history of base-metal mining, and although the number of active operations has halved in recent years, with copper production a notable casualty, the country remained an important lead and zinc producer. Moreover, several old and new prospects were being evaluated and the level of exploration activity was high.

Production far exceeded domestic consumption for most nonmetallic minerals, thus leaving surpluses for export. The economic development of certain areas, such as the Asturias and the Basque regions, was based on their mineral wealth, and mining continued to be an important current and potential source of income in these and other mineral-rich areas. Exploration was continuing for feldspar (Badajoz, Salamanca, and Toledo), garnet (Galicia), pyrites (Badajoz), and rutile and zircon (Cuidad Real).

## Government Policies and Legislation

Some of Spain's regional governments showed interest in the development of mining in their territory. The independent government of Andalucia (the Junta de Andalucia) completed its first Mining Development Plan (1996-2000), which comprised in the investigation and exploitation of mineral resources by large shareholders, and the development of mining technology and the reform of the Junta's own mining administration (Mining Journal, 2000).

The mineral industry comprised a mix of state and privately owned companies. Minerals belong to the state under an arrangement known as the "Regalía Principal." The Mining Law of July 19, 1944, as amended, and the Hydrocarbon Law of December 26, 1950, govern the mineral industry. The Ministerio de Industria y Energía (Ministry of Industry and Energy) implements the mineral laws, regulates the private sector, and manages most of the state-owned companies through the Instituto Nacional de Industria (INI), which is a state

holding company. INI and Instituto Geológico y Minero are the principal Government mineral-resource agencies (table 5).

Economically speaking, 1999 appeared to be a good year for Spain. The gross national product grew by 3.7% which was only slightly lower than the 4% achieved in 1998. Exports were down slightly, but this was more than offset by stronger domestic demand. Compared with that of 1998, there was an upsurge in private consumption (4.5%) and that in expenditure on construction (8.3%). The industrial production index showed an annual increase of 5.9%, and productive capacity was running at more than 80%. Recorded unemployment was equivalent to 9.8% of the working population (Mining Journal, 2000).

## Production

With a few exceptions, mine production continued at about the same level as that of 1998. Of the major metals, commodities with a significant increase in metal production were gold, lead and silver in ore. Production of zinc decreased, and in 1999, iron ore mining had ceased altogether. Total refined copper production increased marginally, and secondary lead metal output dropped slightly. Primary aluminum metal production stayed about the same. The mercury mines at Almadén decreased production levels from those of 1998 by about one-third in accordance with market demand (table 1).

Spain was one of the larger coal producers in the EU, with an output of more than 24 million metric tons (Mt), all types of coal, in 1999. Coal reserves were abundant but difficult to mine. Consequently, the cost of production was high, which made Spanish coal less competitive than that of many other countries. The leading producer of soft coal was Huelleras del Norte S.A. and the leading producer of lignite was Empresa Nacional de Electricidad S.A. The country continued to be a large importer of mineral fuels. Spain's production of crude oil was limited.

Among industrial minerals, fluorspar and potash production increased, and magnesite production decreased. Quarried mineral products, particularly quarried stone, accounted for a significant share of the value of all mineral production in Spain. In mineral fuels and related materials, natural gas output decreased slightly and petroleum output decreased by about 25%.

## Trade

Trade flows were liberalized after Spain joined the EU and the differences between Spanish tariffs and EU Common

Market tariffs were significantly reduced. In 1998 the only mineral-related commodities in which Spain was a net exporter to other EU countries, thereby reducing its trade deficit, were lead, mercury, nonmetallic mineral manufactured products, slate and other crude industrial minerals, and zinc.

Table 2 lists the relation of selected classes of mineral commodities on Spain's balance of payment position in relation to the EU and the world. Tables 3 and 4 list exports, as well as reexports, and imports of selected mineral commodities by Spain in 1998 (the latest year for which data are available), respectively.

## Commodity Review

### Metals

**Aluminum.**—Alumina and primary aluminum were produced almost entirely by Alcoa Inespal S.A. Alcoa was a holding company with three primary aluminum plants and three flat rolled sheet and extrusions plants. Alúmina Española S.A., which was a subsidiary of Alcoa, near San Ciprián, was its only producer of alumina and alumina hydrates in Europe: it was also one of Alcoa's producer of primary aluminum in standard sheets and special alloys (Metal Bulletin Monthly, 1999a).

**Copper.**—MK Gold Co. of the United States purchased the Las Cruces copper deposit of Rio Tinto plc. of the United Kingdom. The deposit was located in the Andalucía region about 15 kilometers (km) north of Seville within the Iberian pyrite belt. The purchase price of \$42 million included exploration rights to substantial tracts of prospective ground. MK would also pay a 1.5% royalty on copper sales revenue when copper prices exceeded \$0.80 per pound. Resources were estimated to be 15 Mt grading 6.1% copper. The copper ore was partly overlain by a gold-bearing gossan, which had not been evaluated. The copper ore could be mined by surface mining. Once mining began, copper metal would be extracted by a hydrometallurgical process of low-pressure leaching in autoclaves followed by standard solvent extraction and electrowinning. The process was expected to produce 65,000 metric tons per year (t/yr) of London Metal Exchange-grade A cathodes which would be marketed mainly in Europe (Engineering and Mining Journal, 1999).

Navan Resources (Almagrera) Ltd. of Ireland reported that it would debt-finance the expansion of its Spanish mining and metallurgical operations. Deutsch Bank London plc. agreed in principal to provide funding for the first part of the development of the new copper-lead-zinc mine at Aguas Teñidas near Huelva. Navan initiated development of its polymetallic (copper, lead, and zinc) Aguas Teñidas Mine near Huelva in November 1997 and was continuing with the project. A 1,400-meter (m) access decline and a 250-m vertical ventilation raise from surface was completed. Navan was continuing with drilling and trial stoping to provide a representative bulk sample from a zone within the eastern portion of the ore body. Aguas Teñidas was the first underground mine operation for metallic minerals to be developed in Spain in several years and was expected to be in full production by 2001 (Mining Journal,

1999a).

The mine would supply Navan's nearby Almagrera mill and concentrator (formerly owned by Almagrera S.A.) with 1 million tons per year of ore. Metal output from these operations was expected to be 55,000 t/yr of zinc, 8,000 t/yr of copper, 8,000 t/yr of lead, and 37 t/yr of silver. On its own, Almagrera was marginal and had incurred significant losses, but Navan believed the problems would be overcome by developing the higher graded ore of the Aguas Teñidas Mine (Mining Journal, 1999b).

Minas de Rio Tinto S.A.'s (MRT) Cerro Colorado Mine near Huelva was not expected to reopen fully until copper prices improve substantially. The mine, which produced 30,000 metric tons (t) of copper-in-concentrate in 1997, was closed in October 1998 after it ran into problems paying its equipment and parts suppliers. MRT has sought creditor protection in the Spanish courts and, in 1999, cut back to its previous mining rate of 20,000 metric tons per day (t/d) of ore and reduced the workforce from 750 to 250. Also, it was mining 5,000 t/d of gold-silver ore from the small Poderosa Mine near the Cerro Colorado facilities (Metal Bulletin, 1999c).

EuroZinc Mining S.A.'s drilling program at its Aljustrel copper-lead-zinc property was reported to have returned evidence of high-grade mineralization. The program was designed to be a reserve definition exercise to concentrate on the Feitas deposit. EuroZinc stated it intended to complete the feasibility study of the project as soon as possible (Mining Magazine, 1999b).

**Gold.**—Rio Narcea Gold Mines Ltd. controlled about 2,000 square kilometers of mineral rights in regions of the northwestern Iberian Peninsula that were once an important source of gold for the Roman Empire. Its open pit El Valle Mine, which was Spain's newest gold mine, was located near Salas in Asturias, northern Spain. Work was concentrated on preparing the first phase of El Valle pit for production and finalizing the first phase of the Boinas East pit. Drilling closed the spacing on the Black Skarn and resulted in the discovery of the high-grade Sienna Zone below the Boinas pit. Both zones were included in the deposit's estimated underground resource of 23 t of gold in 3 Mt of material averaging 7.39 grams per ton gold. Exploration was also continuing on the Carlés project (Mining Magazine, 2000).

Barrick Gold Corp. and Rio Narcea signed a joint-venture agreement for Barrick's participation in some of Rio Narcea's gold projects. Barrick, which owned 60% of the joint venture, and Rio Narcea, which owned 40%, subscribed \$450,000 and \$300,000, respectively, toward the purchase price of \$750,000 for the properties, all of which lie in the Rio Narceas, the Navelgas, the Palencia-Leon, and the Venteniella gold belts in northern Spain. The joint venture did not cover Rio Narcea's El Valles and Carlés project areas, although the company agreed to give Barrick first refusal for funding these projects and over the sale of these deposits, should this become necessary (Mining Journal, 2000).

**Iron Ore and Steel.**—A principal producer of iron ore was Compañía Andaluza de Minas S.A., which had worked its open pit mine at Alquife (Granada). Mining was halted in October 1996, resumed briefly in 1997, then halted again. The mine remained inactive at yearend 1999.

Crude steel production totaled almost 15 Mt. The min-mill and the integrated sectors produced 10.7 Mt and 4.2 Mt, respectively. The rise in Spanish demand produced the third consecutive record year for apparent consumption. Provisional figures indicated apparent consumption of 17 Mt in 1999, which was 9% higher than that of 1998. High carbon steel consumption rose by 12% and low carbon rose by 9%. Steel industry investments, which were, for the most part, at plants owned by Aceralia Corporación Siderúrgica, rose 49% (Metal Bulletin, 1999e).

The downturn in ferrous scrap prices in Spain was relentless. Prices fell by almost an estimated 50% in 1998. Collapse in demand in Asia and Turkey and the rerouting of high volumes of scrap exports, much of which was from Russia, to Europe and Spain, in particular, caused a lot of oversupply in ferrous scrap in Spain and cut heavily into the margins of its domestic suppliers. Scrap imports from Russia alone rose to 513,760 t at the end of the first half of 1998 from 165,262 t in 1996. In the first half of 1998 (the latest year for which data are available), ferrous scrap imports reportedly reached a record total of 3.2 Mt, which was a 25% increase from the same period in 1997; imports from non-EU countries doubled to more than 1 Mt from 592,968 t (Metal Bulletin Monthly, 1999b).

Under new regulations adopted by the Government, exporters of scrap to Spain would be obliged to certify that the material had been checked for radioactive contamination. The number of incidents of receipt of radioactive contaminated scrap from exporters of large tonnage of scrap, such as Russia and Ukraine, was increasing. All cargos of scrap entering Spain from other countries must be accompanied by a document certifying the shipment was not radioactive contaminated. Any shipment without that certification will be refused. If a shipment is found to be radioactive, it will be returned to its port of origin in cooperation with Enresa, which is the Spanish radioactive materials authority (Metal Bulletin, 1999d).

**Silicon.**—Ferroatlántica S.A. announced its third silicon furnace was restarted in December 1998 and has reached its 10,000-t/yr capacity. This raised Ferroatlántica's total silicon metal production capacity to 30,000 t/yr. No further expansion was planned in either silicon metal or ferrosilicon by the company following its acquisition of the Venezuelan ferroalloys producer Fesilven S.A. Venezuelan ferrosilicon was not being marketed in Europe because of the antidumping duty imposed by the European Commission (EC) (Metal Bulletin, 1999b).

**Tantalum.**—Golden Dynasty Resources Ltd. and Hardrock Resources Ltd. of Canada signed an agreement whereby Golden Dynasty acquired Hardrock's tantalum concessions in northwestern Spain. Golden Dynasty reported its drilling had identified two pegmatic zones that contain tantalum, lithium, and tin mineralization along a strike zone of 2 km in length with

an average width of 10 m. The concessions cover ground previously worked for niobium, tantalum, and tin (Mining Journal, 1999c).

**Zinc.**—Boliden S.A.'s Los Frailes Mine, which was one of the biggest open pit zinc mines in Europe, was closed in early 1998 after a large toxic spill. A waste reservoir dam ruptured after an earthslide in bedrock 14 m below the original surface. The accident reportedly resulted from the lateral movement of more than 60 m of a 700-m section of the dam along a bedding plane in what is called the Margas Azules (Blue Clay) Formation. Mining operations started mid-1999 after the license, as well as a permit to dump tailings in the Aznalcollar open pit, was granted. The mine was operating at 80% capacity. At maximum capacity, the mine could produce 125,000 t/yr of zinc in concentrates (Metal Bulletin, 2000)

Asturiana de Zinc S.A. (Azsa) was seeking to expand its zinc mining operations and was looking for a mine to replace its Reocín Mine, which was expected to close in 2003. The Reocín operation had been taken over from Compagnie Royale Astrurienne of Belgium by AZSA in 1981. Reocín furnished zinc concentrates from underground and open pit operations to AZSA's electrolytic zinc plant at San Jaun de Nieva (Metal Bulletin, 1999a).

### **Industrial Minerals**

**Clay.**—Watts, Blake and Bearne & Co. plc. (WBB) of the United Kingdom announced the establishment of a new company, WBB España. WBB bought three clay companies as sources of high-quality red-firing clays for the tile industry. About 3 Mt of red clay was extracted and sold each year from three main areas—Galve (near Teruel), St. Juan de Moró (near Castellon), and Villar del Arzobispo (near Valencia). This tonnage almost doubled WBB's annual clay output worldwide. WBB primarily produced "white-firing ceramic clays." When the two clays are blended and incorporated in a ceramic body and fired at temperatures that exceed 1,000° C, they produce a final product of a light red color. The color results from the typically 5% to 7% iron oxide in the clay (WBB Group, November 1999, Claycutter—Viva Espana, accessed July 31, 2000, at URL [http://www.wbb.co.uk/wbbhtm/press/inside\\_story.htm](http://www.wbb.co.uk/wbbhtm/press/inside_story.htm)).

**Magnesite.**—Caustic calcined grades of magnesite were produced in Spain for nonrefractory markets, and crude magnesite was produced from deposits at Eugui, Navarra, and used to make magnesia-based refractory bricks. Output of both has been trending upward in the 1990's. The increase in crude magnesite production reflects improvements in the steel industry, where refractory bricks are used to line furnaces.

**Potash.**—Dead Sea Works Ltd. (DSW) consortium was the successful bidder for potash producer Grupo Potasas (which was renamed Iberpotash S.A.) in a two-stage \$206 million investment package. The consortium consisted of DSW (60%), La Seda de Barcelona S.A. (20%), and Tolsa S.A. (20%). The acquisition was part of the strategy to expand production

capabilities by acquiring holdings in potash production facilities worldwide. The two operating companies of the former Grupo Potasas were Suria K S.A. and Potasas de Lobregat S.A. Both operations mine sylvinite and sylvite ore from what is essentially the same Cataluña deposit. Estimated combined reserves were 123 Mt of potassium chloride (Phosphorus & Potassium, 1999).

### **Mineral Fuels**

**Coal.**—The EC agreed that Spain could provide about \$1 billion in State aid to modernize and rationalize its coal industry. The EC can authorize payments where aid can be shown to be assisting in the restructuring of an industry that might falter without public money. In this case, the EC ruled that Spain's coal aid package was in conformity with the EU's plan to modernize, rationalize, restructure, and reduce the activity of the coal industry between the period 1998 and 2002 (Mining Journal, 1999d).

Domestic coal consumption in 1999 was almost 33 Mt, about 5 Mt was consumed in coke ovens and patent fuel plants, of that total, 26 Mt was used to generate power, and the remainder was used in general industry. Investment continued with Hullera Vasco-Leones development of a new mine to be at full capacity by yearend 1999. It would be Spain's most modern coal mine in the best of its underground deposits (Mining Magazine, 1999a).

**Petroleum.**—Repsol-YPF S.A., which was Spain's second biggest power utility, reportedly was studying a tie-up with Iberdrola S.A., as part of a wide range of expansion options. In 1999, Repsol S.A. won control of Argentina's largest oil group YPF S.A. with a \$15 billion take-over that doubled Repsol's size and turned it into one of the world's 10 largest oil firms. Repsol also merged its Argentine unit Astra S.A., which was an exploration and production company, with YPF. The world's largest oil, electricity, and gas groups have begun moves towards integration. Crude producers were attracted toward power companies, and gas and electricity groups were in search of a steady supply of raw materials (Alexander's Gas and Oil Connections, February 2000, Repsol looking at different options for expansion, accessed February 24, 2000, at URL <http://www.gasandoil.com/goc/company/cne00685.htm>).

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### **Major Sources of Information**

Instituto Geológico y Minero  
Río Rosas, 23  
28003 Madrid, Spain  
Ministerio de Industria y Energía  
Doctor Fleming, 7  
28036 Madrid, Spain

TABLE 1  
SPAIN: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995	1996	1997	1998	1999 e/
<b>METALS</b>					
Aluminum:					
Alumina 3/	1,070,580	1,094,797	1,110,300	1,100,000	1,100,000
Metal:					
Primary	361,100	361,829	359,904	361,900 r/	363,900 4/
Secondary	106,975	153,837	153,800	154,000	224,000 4/
Cadmium metal	397	307	301	196	--
Copper:					
Mine output, Cu content	22,614	38,392	37,833	37,000	3,500
Metal:					
Blister:					
Primary	139,900 r/	248,500	288,900	304,330 r/	290,500 4/
Secondary e/	19,100 r/	22,400	23,800	30,000	28,000
Total	159,000 r/	270,900	312,700	334,330 r/	318,500 4/
Refined: e/					
Primary	117,000	210,000	229,000	239,600 r/ 4/	239,618 4/
Secondary	47,100	54,000	63,300	65,000	65,000 4/
Total	164,000	264,000	292,000	304,330 r/	304,618 4/
Germanium oxide, Ge content	kilograms	4,145	6,478	6,500 e/	6,000
Gold, mine output, Au content	do.	4,131	2,832	1,824	3,295
Iron and steel:					
Iron ore and concentrates, Fe content	thousand tons	960	588	58	-- r/
Metal:					
Pig iron	do.	5,128	4,127	3,926	4,235
Ferroalloys, electric furnace	do.	1,200	1,392	1,650	1,781
Steel:					
Crude	do.	13,975	12,038	13,644	14,827
Castings and forgings	do.	121	123	125 e/	150
Total		14,096	12,161	13,769	14,977
Semimanufactures	do.	13,175	11,647	12,421	13,259
Lead:					
Mine output, Pb content		30,077	23,826	23,900	21,000 r/
Metal, secondary e/		80,000	86,000	74,900	90,000 r/
Mercury, metal	thousand tons	1,497	862	389	675
Silver, mine output, Ag content	kilograms	123,615	108,901	66,000	47,000 r/
Tin:					
Mine output, Sn content		2,047	1,917	4,000 e/	5,000 e/
Metal, primary e/		100	--	--	--
Titanium dioxide e/		20,000	18,000	18,000	16,000
Uranium, mine output, U <sub>3</sub> O <sub>8</sub> content	thousand tons	420	424	425	335
Zinc:					
Mine output, Zn content		172,468	139,589	171,800	128,100
Metal, primary and secondary		346,100	360,800	364,200	358,300
<b>INDUSTRIAL MINERALS</b>					
Barite, BaSO <sub>4</sub>		28,600	28,000	90,000 r/	70,000 r/
Bromine e/		200	100	100	100
Calcium carbonate e/		1,600	1,650	1,750	1,880
Cement, hydraulic, other than natural	thousand tons	26,423	25,157	27,632	28,000
Clays:					
Attapulgit		94,266	130,140	125,000 e/	130,000 e/
Bentonite		172,265	151,155	170,000 e/	193,000 r/
Kaolin, washed		316,074	317,918	296,000	310,000
Other e/	thousand tons	25,300	15,000	20,000	20,000
Diatomite and tripoli		44,623	34,492	36,000 e/	56,000 r/ 4/
Feldspar		379,284	415,189	398,000	430,000
Fluorspar:					
Acid-grade		108,205	109,085	110,000 e/	110,000 e/
Metallurgical-grade		10,206	7,441	10,000 e/	14,000 e/
Total		118,411	116,526	120,000 e/	124,000 e/
Gypsum and anhydrite, crude	thousand tons	7,495	8,191	8,300	7,500 r/
Kyanite, andalusite, related materials e/		2,000	2,000	2,500	2,500
Lime, hydrated and quicklime e/	thousand tons	1,500	1,500	1,500	1,500
Magnesite, calcined		150,000 e/	150,000 e/	171,000 r/	201,000 r/

See footnotes at end of table.

TABLE 1--Continued  
 SPAIN: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995	1996	1997	1998	1999 e/	
<b>INDUSTRIAL MINERALS--Continued</b>						
Mica	2,628	2,507	2,500	2,500 e/	2,500	
Nitrogen, N content of ammonia	thousand tons	453	466	497	460 e/	437 4/
Pigments, mineral: e/						
Ocher	7,000	8,000	8,000	7,000 r/	7,000	
Red iron oxide	15,000	15,000	15,000	15,000 r/	15,000	
Potash, K <sub>2</sub> O equivalent	759,923	717,064	639,000	597,000 r/	656,000 4/	
Pumice e/	700,000	700,000	600,000	600,000	600,000	
Pyrite, including cuprous, gross weight	thousand tons	875	1,042	993	868	733 4/
Salt:						
Rock, including byproduct from potash works	do.	2,215	2,216	2,200 e/	2,200	2,200
Marine and other	do.	1,471	1,220	1,400 e/	1,200	1,400
Sand and gravel, silica sand e/ 5/	do.	5,105	5,300	5,800	6,200	6,200
Sepiolite, meerschaum	375,000 e/	761,596	695,000 r/	750,000	800,000	
Sodium compounds, n.e.s.:						
Soda ash, manufactured e/	thousand tons	500	500	500	500	500
Sulfate, natural:						
Glauberite, Na <sub>2</sub> SO <sub>4</sub> content	637,525	667,177	650,000	650,000	675,000	
Thenardite, Na <sub>2</sub> SO <sub>4</sub> content	175,717	187,746	180,000 e/	180,000 e/	200,000	
Manufactured e/	150,000	100,000	125,000	125,000	125,000	
Stone: e/						
Chalk	thousand tons	136	140	140	136,000	136,000
Dolomite	do.	4,608 4/	5,100	5,400	5,000	5,000
Limestone	do.	2,326 4/	2,400	2,500	2,200	2,200
Marble	do.	2,151 4/	2,347 4/	2,400	2,400	2,400
Marl	do.	5,145 4/	8,500	8,950	9,845 4/	9,000
Basalt	do.	1,195 4/	1,200	1,400	1,000	1,000
Granite	do.	1,375 4/	1,295 4/	1,400	1,400	1,400
Ophite	do.	2,165 4/	2,200	2,200	2,000	2,000
Phonolite	do.	677 4/	650	650	650	650
Porphyry	do.	783	800	800	1,000	1,000
Quartz	do.	1,445 4/	1,438 4/	1,520	1,500	1,500
Quartzite	do.	2,255 4/	2,200	2,400	2,000	2,200
Sandstone	do.	2,629 4/	2,600	2,500	2,500	2,500
Serpentine	do.	979	900	900	1,000	1,000
Slate	do.	551	705	555	615 4/	600
Other	do.	619	1,134 4/	1,000	1,000	1,000
Strontium minerals, Sr <sub>2</sub> O <sub>4</sub> content	105,868	114,829	92,000 e/	111,000 r/	128,000 4/	
Sulfur:						
S content of pyrites	thousand tons	403	439	480	430 r/	388 4/
Byproduct: e/						
Of metallurgy	do.	282	420	250	461 r/	455 4/
Of petroleum	do.	160	250	150	100 r/	110 4/
Of coal (lignite) gasification	do.	2	1	2	1	-- 4/
Total	do.	847	1,110	882	992 r/	953 4/
Talc and steatite	112,341	109,756	110,000 e/	110,000 e/	111,000 4/	
<b>MINERAL FUELS AND RELATED MATERIALS</b>						
Coal (marketable):						
Anthracite	thousand tons	6,275	6,487	6,678	6,393	5,436 4/
Bituminous	do.	11,425	7,195	7,200 e/	6,004	6,295 4/
Lignite (black and brown)	do.	10,776	9,604	12,577	13,675	12,535 4/
Total	do.	28,476	23,286	26,455	26,072	24,266 4/
Coke, metallurgical	do.	2,438	2,403	2,622	2,649	2,500
Gas, natural (marketed)	million cubic meters	422	466	178	114	112 4/
Peat e/	70,000	50,000	60,000	50,000	50,000	
Petroleum:						
Crude	thousand 42-gallon barrels	4,747	3,846	2,850	4,013	2,295 4/
Refinery products:						
Liquefied petroleum gas	do.	21,019	17,655	18,954	18,096	18,000
Naphtha	do.	12,900	19,797	22,899	24,990	25,000
Gasoline, motor	do.	82,544	83,113	78,497	84,405	85,000
Jet fuel	do.	32,064	33,504	33,000	36,000	36,000
Kerosene	do.	12,555	15,000	20,000	30,000	30,000

See footnotes at end of table.

TABLE 1--Continued  
 SPAIN: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995	1996	1997	1998	1999 e/	
<b>MINERAL FUELS AND RELATED MATERIALS--Continued</b>						
Petroleum--Continued:						
Refinery products--Continued:						
Distillate fuel oil	thousand 42-gallon barrels	124,097	129,080	138,249	148,969	150,000
Residual fuel oil	do.	80,366	73,213	77,276	86,407	85,000
Other e/	do.	53,000	50,500	35,500	37,400	38,000
Refinery fuel and losses e/	do.	13,500	12,000	12,000	10,000	10,000
Total e/	do.	432,000	434,000	436,000	476,000	477,000

e/ Estimated. r/ Revised. -- Zero.

1/ Table includes data available through December 2000.

2/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.

3/ Reflects aluminum hydrate.

4/ Reported figure.

5/ Includes sand obtained as a byproduct of feldspar and kaolin production.

TABLE 2  
 SPAIN: 1998 BALANCE OF PAYMENTS, SELECTED MINERAL COMMODITIES

(Thousand dollars)

Mineral commodity	Exports to EU	Imports from EU	Net gain or (loss)	Exports to the world	Imports from the world	Net gain or (loss)
<b>Crude industrial minerals:</b>						
Cement, hydraulic	40,188	36,131	4,057	169,782	145,737	24,045
Clays, crude	10,364	10,631	(267)	11,930	16,985	(5,055)
Feldspar	2,230	5,907	(3,677)	4,065	12,713	(8,648)
Granite, sandstone etc.	47,874	40,704	7,170	190,716	121,921	68,795
Salt and brine	15,507	4,714	10,793	21,828	5,332	16,496
Steatite, natural talc	1,907	7,469	(5,562)	2,358	9,780	(7,422)
Other	169,466	91,322	78,144	237,440	292,002	(54,562)
Total	287,536	196,878	90,658	638,119	604,470	33,649
<b>Metalliferous ores:</b>						
Copper	1,602	24,971	(23,369)	13,769	295,547	(281,778)
Lead	2,066	433	1,633	5,181	909	4,272
Tin	389	--	389	389	--	389
Zinc	18,091	38	18,053	27,844	139,306	(111,462)
Other (including waste and scrap)	52,164	42,097	10,067	194,486	639,225	(444,739)
Total	74,312	67,539	6,773	241,669	1,074,987	(833,318)
<b>Metals:</b>						
Aluminium	589,851	648,383	(58,532)	722,582	908,468	(185,886)
Iron and steel 1/	3,326,137	4,969,235	(1,643,098)	5,021,067	6,572,217	(1,551,150)
Lead	1,870	21,184	(19,314)	2,232	65,692	(63,460)
Mercury	65	1,456	(1,391)	1,488	1,459	29
Other nonferrous metals	203,187	22,527	180,660	215,220	16,929	198,291
Total	4,121,110	5,662,785	(1,541,675)	5,962,589	7,564,765	(1,602,176)
Mineral fuels	781,150	1,054,891	(273,741)	2,262,456	8,576,424	(6,313,968)

1/ Includes ferroalloys and silicon metal.

Source: United Nations Statistical Office (microfiche).

TABLE 3  
SPAIN: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>METALS</b>			
<b>Alkali and alkaline-earth metals:</b>			
Alkali metals	112	--	United Kingdom 65; Mexico 33; Syria 10.
Alkaline-earth metals	value, thousands \$25	--	Senegal \$14; Portugal \$7; France \$4.
<b>Aluminum:</b>			
Ore and concentrate	631	--	Tunisia 500; Portugal 119; Netherlands 12.
Oxides and hydroxides	400,204	--	Netherlands 118,222; United Kingdom 65,860; Russia 65,632.
Ash and residue	232	--	Portugal 160; Italy 72.
<b>Metal including alloys:</b>			
Scrap	9,449	39	France 3,054; Italy 2,377; Germany 2,224.
Unwrought	107,743	1,140	Portugal 27,948; Russia 18,316; Italy 13,597.
Semimanufactures	190,476	8,254	Italy 42,737; France 31,116; Germany 24,966.
<b>Antimony:</b>			
Oxides	829	--	Italy 473; France 126; United Kingdom 70.
Metal including alloys, all forms	6	--	France 3; Portugal 3.
Bismuth, metal including alloys, all forms	12	2	Portugal 3; Germany 1; unspecified Asia 4.
Cadmium, metal including alloys, all forms	20	--	All to the Netherlands.
<b>Chromium:</b>			
Ore and concentrate	1,268	--	Portugal 885; Italy 274; Venezuela 48.
Oxides and hydroxides	929	--	Italy 353; Netherlands 100; Portugal 94.
Metal including alloys, all forms	503	--	France 337; Germany 62; United Kingdom 35.
<b>Cobalt:</b>			
Oxides and hydroxides	34	--	Brazil 17; Italy 16; Cuba 1.
Metal including alloys, all forms	value, thousands \$40	--	Argentina \$26; United Kingdom \$13; Portugal \$1.
<b>Copper:</b>			
Ore and concentrate	59,880	--	Canada 16,990; Brazil 11,257; Bulgaria 10,686.
Oxides and hydroxides	52	--	Argentina 18; Portugal 15; Cuba 9.
Sulfate	3,544	--	Portugal 1,169; Colombia 901; France 613.
Ash and residue	337	--	Germany 203; Belgium-Luxembourg 134.
<b>Metal including alloys:</b>			
Scrap	31,089	1,056	France 7,998; Germany 7,320; Italy 4,202.
Unwrought	135,640	1,642	France 36,954; Italy 35,574; United Kingdom 22,252.
Semimanufactures	127,068	721	Italy 38,945; Portugal 37,116; France 13,722.
Germanium, metal including alloys, all forms	value, thousands \$4	--	All to Argentina.
<b>Gold:</b>			
Waste and sweepings	do. \$10	--	All to Germany.
Metal including alloys, unwrought and partly wrought	do. \$200,306	\$3,657	Portugal \$181,003; Italy \$6,967; Switzerland \$4,816.
<b>Iron and steel:</b>			
<b>Ore and concentrate:</b>			
Including roasted pyrite	110,225	--	France 55,173; Lebanon 23,213; Greece 14,119.
Excluding roasted pyrite	value, thousands \$1,367	--	France \$1,364; Switzerland \$3.
Pyrite, roasted	55,052	--	Lebanon 23,213; Greece 14,119; Israel 11,640.
<b>Metal:</b>			
Scrap	16,723	61	France 7,053; Italy 3,397; Portugal 1,980.
Pig iron, cast iron, related materials	3,749	12	France 1,017; Portugal 469; unspecified Asia 506.
<b>Ferroalloys:</b>			
Ferrochromium	906	--	Portugal 472; Belgium-Luxembourg 312; Netherlands 50.
Ferromanganese	61,866	--	Germany 22,776; Italy 11,856; United Kingdom 11,741.
Ferromolybdenum	221	--	Italy 186; Portugal 30; Venezuela 4.
Ferronickel	3	--	All to the Czech Republic.
Ferroniobium	26	--	Netherlands 24; Portugal 2.
Ferrosilicomanganese	51,124	3,223	Germany 15,750; Portugal 7,580; Italy 6,407.
Ferrosilicon	6,814	(2/)	France 3,954; Portugal 2,802; Morocco 28.
Ferrotitanium and ferrosilicotitanium	7	--	Germany 2; Peru 2; Portugal 2.
Ferrovandium	220	19	Netherlands 150; Italy 49; Belgium-Luxembourg 1.
Silicon metal	8,517	445	United Kingdom 3,561; France 2,086; Germany 714.
Unspecified	398	--	France 253; Yugoslavia 44; Cuba 15.
Steel, primary forms	384,726	83,514	Germany 128,833; Italy 110,038; France 22,761.
<b>Semimanufactures:</b>			
Bars, rods, angles, shapes, sections	thousand tons 2,541	330	Portugal 444; France 305; Germany 294.
Rails and accessories	80,502	1,600	Morocco 26,211; Iran 24,298; Portugal 12,663.

See footnotes at end of table.

TABLE 3--Continued  
 SPAIN: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
METALS--Continued			
Iron and steel--Continued:			
Metal--Continued:			
Semimanufactures--Continued:			
Flat-rolled products:			
Of iron or nonalloy steel:			
Not clad, plated, coated	631,617	32,378	France 164,622; Portugal 113,732; United Kingdom 77,284.
Clad, plated, coated	504,924	4,425	France 121,518; United Kingdom 73,779; Italy 72,536.
Of alloy steel	474,648	48,797	Italy 98,948; Germany 68,935; France 45,410.
Wire	165,926	1,813	France 63,399; Portugal 22,329; Iran 15,662.
Tubes, pipes, fittings	544,120	44,073	France 113,283; Portugal 98,861; United Kingdom 39,231.
Lead:			
Ore and concentrate	41,291	--	China 15,171; Italy 6,835; Japan 5,337.
Oxides	2,468	--	Portugal 909; Morocco 546; unspecified Asia 240.
Metal including alloys:			
Scrap	1,465	--	France 1,394; Germany 24; Portugal 22.
Unwrought	2,073	--	Portugal 1,970; Germany 71; Argentina 20.
Semimanufactures	373	--	Netherlands 196; Turkey 58; Argentina 40.
Magnesium, metal including alloys:			
Scrap	438	--	Norway 433; Germany 5.
Unwrought value, thousands	\$16	--	Portugal \$14; France \$2.
Semimanufactures	112	1	Portugal 82; France 14; Switzerland 14.
Manganese:			
Ore and concentrate	1,414	--	France 848; Italy 143; Venezuela 92.
Oxides	289	--	Portugal 82; Cuba 81; Algeria 60.
Metal including alloys, all forms	2,334	--	Italy 677; United Kingdom 527; Germany 404.
Mercury	313	2	Hong Kong, China 70; China 38; India 34.
Molybdenum:			
Ore and concentrate:			
Roasted	32	--	All to Italy.
Unroasted value, thousands	\$2	--	All to Mexico.
Metal including alloys:			
Unwrought do.	\$3	--	All to Portugal.
Semimanufactures do.	\$513	--	Germany \$162; Brazil \$93; Belgium-Luxembourg \$63.
Nickel:			
Ore and concentrate	3	--	Egypt 2; Morocco 1.
Oxides and hydroxides	3	--	Portugal 2; Morocco 1.
Metal including alloys:			
Scrap	143	--	Belgium-Luxembourg 58; Netherlands 25; France 21.
Unwrought	2,252	6	Italy 1,483; Netherlands 529; United Kingdom 193.
Semimanufactures	76	--	Germany 24; Italy 16; France 10.
Platinum-group metals:			
Waste and sweepings value, thousands	\$1,368	--	United Kingdom \$1,353; Germany \$11; Norway \$4.
Metal including alloys, unwrought and partly wrought:			
Palladium do.	\$3,822	--	Germany \$3,363; Portugal \$229; France \$77.
Platinum do.	\$5,474	--	United Kingdom \$5,412; Portugal \$56; Italy \$6.
Rhodium do.	\$30	--	Argentina \$29; Portugal \$1.
Rare-earth, metals including alloys, all forms do.	\$4	--	Hungary 42; Mexico \$2.
Selenium, elemental	23	--	France 22; Portugal 1.
Silver, metal including alloys, unwrought and partly wrought value, thousands	\$45,183	\$24	France \$16,418; Italy \$10,101; Portugal \$7,562.
Tantalum, metal including alloys, all forms do.	\$2	--	All to the United Kingdom.
Tin:			
Ore and concentrate	97	--	All to Belgium-Luxembourg.
Metal including alloys:			
Scrap	169	--	United Arab Emirates 93; United Kingdom 39; Netherlands 27.
Unwrought	1,544	--	Portugal 767; Italy 750; Morocco 14.
Semimanufactures	35	--	Mexico 18; Cuba 12; United Kingdom 2.
Titanium:			
Ore and concentrate	542	--	Portugal 254; Cuba 120; Egypt 84.
Oxides	4,351	14	Canada 3,826; Italy 169; Australia 96.

See footnotes at end of table.

TABLE 3--Continued  
 SPAIN: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
METALS--Continued			
Titanium--Continued:			
Metal including alloys, all forms	351	2	France 89; Italy 50; unspecified Asia 181.
Tungsten, metal including alloys:			
Unwrought	6	--	All to Italy.
Semimanufactures	value, thousands \$687	\$8	Belgium-Luxembourg \$203; Portugal \$178; Germany \$118.
Uranium and thorium:			
Ore and concentrate	do. \$7,944	--	All to Finland.
Oxides and other compounds	do. \$1,292	\$1,292	
Uranium, metal including all forms	do. \$2,177	--	All to the United Kingdom.
Vanadium:			
Oxides and hydroxides	do. \$2	--	All to Italy.
Ash and residue	12	12	
Metal including alloys, all forms	value, thousands \$1	--	All to Portugal.
Zinc:			
Ore and concentrate	121,884	--	Finland 26,942; Belgium-Luxembourg 16,419; Italy 15,188.
Oxides	3,575	40	France 1,177; Portugal 824; Italy 673.
Blue powder	8	--	Portugal 6; Belgium-Luxembourg 2.
Ash and residue	5,335	--	Portugal 3,889; France 1,003; Belgium-Luxembourg 238.
Metal including alloys:			
Scrap	1,402	--	France 828; India 287; Italy 191.
Unwrought	148,734	19,077	Netherlands 60,556; United Kingdom 22,478; Italy 19,251.
Semimanufactures	1,168	--	Portugal 788; France 85; Morocco 39.
Zirconium:			
Ore and concentrate	3,399	--	United Arab Emirates 672; Tunisia 539; Portugal 495.
Metal including alloys, semimanufactures	30	--	Tunisia 29; Yugoslavia 1.
Other:			
Ores and concentrates	value, thousands \$2,442	--	Germany \$2,163; Italy \$181; Portugal \$28.
Oxides and hydroxides	33,172	10	France 30,314; Portugal 1,718; Netherlands 903.
Ashes and residues	9,967	12	France 4,105; Portugal 4,050; Japan 766.
Base metals including alloys, all forms	6	--	All to Portugal.
Precious metals, n.e.s.:			
Ores and concentrates	kilograms 40,450	--	All to Belgium-Luxembourg.
Waste and scrap	value, thousands \$3,577	--	Belgium-Luxembourg \$1,234; France \$948; Switzerland \$931.
INDUSTRIAL MINERALS			
Abrasives, n.e.s.:			
Natural, corundum, emery, pumice, etc.	4,272	16	Italy 1,930; Germany 1,162; Portugal 277.
Artificial:			
Corundum	148	--	France 47; Venezuela 45; Algeria 24.
Silicon carbide	6,371	--	Italy 1,464; Germany 1,392; United Kingdom 1,372.
Dust and powder of precious and semiprecious stones including diamonds	value, thousands \$1,597	--	Portugal \$1,505; Brazil \$49; Singapore \$23.
Grinding and polishing wheels and stones	7,918	96	Germany 1,739; France 1,051; Brazil 850.
Asbestos, crude	15	--	All to Morocco.
Barite and witherite	70,264	--	United Kingdom 40,075; Algeria 10,251; Italy 6,362.
Boron:			
Crude natural borates	7,637	(2/)	France 3,146; India 1,659; Italy 1,039.
Oxides and acids	735	18	Portugal 564; Italy 62; France 53.
Cement	thousand tons 4,169	2,236	United Kingdom 270; France 257; Algeria 230.
Chalk	67,986	--	France 17,573; Germany 16,921; Morocco 12,925.
Clays, crude:			
Bentonite	62,307	--	United Kingdom 39,199; Germany 7,216; Portugal 5,029.
Chamotte earth and dinas earth	1,933	11	Cuba 1,200; Andorra 310; Italy 100.
Fire clay	1,012	--	France 268; Italy 265; Germany 225.
Fuller's earth	20,736	--	Netherlands 11,251; Italy 5,943; Belgium-Luxembourg 2,290.
Kaolin	104,342	21	Italy 45,822; Germany 14,278; France 11,111.
Other	52,410	227	Germany 14,538; Portugal 12,815; Belgium-Luxembourg 10,140.
Cryolite and chiolite	2	--	All to Portugal.
Diamond, natural:			
Gem, not set or strung	value, thousands \$1,709	\$57	Belgium-Luxembourg \$665; Germany \$434; Austria \$347.
Industrial stones	do. \$1,282	--	Belgium-Luxembourg \$991; Italy \$118; South Africa \$101.

See footnotes at end of table.

TABLE 3--Continued  
 SPAIN: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS--Continued</b>			
Diamond, natural--Continued:			
Dust and powder	value, thousands	\$1,578	-- Portugal \$1,505; Brazil \$49; Ireland \$4.
Diatomite and other infusorial earth		2,301	19 France 660; Italy 468; Portugal 347.
Feldspar		29,512	-- Portugal 12,400; Morocco 7,742; Italy 3,010.
Fertilizer materials:			
Crude, n.e.s.		25,368	-- Italy 10,488; Portugal 6,075; Andorra 4,400.
Manufactured:			
Ammonia		7,173	-- Morocco 6,890; Belgium-Luxembourg 158; unspecified 47.
Nitrogenous		617,508	1 Germany 137,133; France 105,988; Netherlands 92,867.
Phosphatic		1,241	-- Portugal 1,126; Italy 100; Greece 15.
Potassic		502,785	63 France 397,824; Algeria 39,600; Greece 19,590.
Unspecified and mixed		242,177	52 Portugal 58,100; Italy 52,290; Belgium-Luxembourg 18,167.
Fluorspar		984	-- Portugal 944; Morocco 40.
Graphite, natural		36	-- France 16; Morocco 14; Tunisia 5.
Gypsum and plaster	thousand tons	3,811	1,000 United Kingdom 708; Denmark 404; Portugal 271.
Iodine		42	-- United Kingdom 35; Colombia 2; Pakistan 2.
Kyanite and related materials:			
Mullite		13	-- India 11; Germany 1; United Kingdom 1.
Unspecified	value, thousands	\$66	-- Portugal \$51; Algeria \$11; Netherlands \$4.
Lime		70,049	-- France 63,286; Portugal 1,542; Equatorial Guinea 1,080.
Magnesium compounds:			
Magnesite, crude		397	-- France 255; Switzerland 49; Mexico 41.
Oxides and hydroxides		139,567	201 France 59,383; United Kingdom 35,183; Netherlands 13,593.
Mica:			
Crude including splittings and waste		460	-- United Kingdom 210; Italy 107; Germany 71.
Worked including agglomerated splittings		84	-- Portugal 20; Belgium-Luxembourg 15; Cuba 10.
Nitrates, crude		133	-- Belgium-Luxembourg 123; Portugal 9; Turkey 2.
Phosphates, crude		78,253	-- United Kingdom 39,618; Finland 23,395; Sweden 14,840.
Phosphorus, elemental		3	-- All to Venezuela.
Pigments, mineral:			
Natural, crude		53	20 Italy 18; Benin 15.
Iron oxides and hydroxides, processed		16,553	1,153 Italy 3,524; France 1,609; Portugal 937.
Precious and semiprecious stones other than diamond:			
Natural	value, thousands	\$320	\$7 Switzerland \$123; Andorra \$120; Thailand \$17.
Synthetic	do.	\$1,347	\$40 Switzerland \$452; Portugal \$317; Italy \$134.
Pyrite, unroasted		51,795	(2/) Turkey 51,752; Switzerland 15; Poland 10.
Quartz crystal, piezoelectric	value, thousands	\$7	-- Hong Kong, China \$3; Switzerland \$3.
Salt and brine		669,534	208 Norway 148,316; France 146,972; Italy 88,493.
Sodium compounds, n.e.s., sulfate, manufactured		644,251	-- Brazil 108,976; Italy 96,393; France 77,709.
Stone, sand and gravel:			
Dimension stone:			
Crude and partly worked		718,944	39,666 Italy 221,329; Hong Kong, China 54,810; unspecified Asia 86,076.
Worked		906,786	55,203 France 287,663; Germany 179,037; United Kingdom 77,780.
Dolomite, chiefly refractory-grade		187,888	4,523 United Kingdom 133,373; Germany 14,100; Ireland 11,595.
Gravel and crushed rock	thousand tons	1,286	-- Portugal 1,001; Andorra 252,642; Gibraltar 16,220.
Limestone other than dimension		265,186	-- Belgium-Luxembourg 150,109; Togo 41,672; Ghana 41,405.
Quartz and quartzite		516,037	-- Norway 412,114; Canada 51,081; Italy 18,771.
Sand other than metal-bearing	thousand tons	1,090	-- Andorra 467; Portugal 393; Italy 189.
Sulfur:			
Elemental:			
Crude including native and byproduct		52,434	-- Lebanon 33,048; France 11,200; Algeria 3,796.
Colloidal, precipitated, sublimed		366	-- France 363; Cuba 1; Mexico 1.
Dioxide		3,309	-- Portugal 3,132; United Kingdom 161; United Arab Emirates 8.
Sulfuric acid		424,820	10,221 Portugal 99,347; France 97,904; Morocco 79,701.
Talc, steatite, soapstone, pyrophyllite		43,887	-- Belgium-Luxembourg 27,270; Portugal 7,879; France 2,339.
Vermiculite, perlite, chlorite		3,979	-- France 3,042; Portugal 430; Italy 267.
Other:			
Crude	thousand tons	1,036	(2/) Belgium-Luxembourg 279; Germany 241; France 234.
Slag and dross, not metal-bearing:			
Granulated slag (slag sand) from iron and steel industry		27	-- Germany 1; Portugal 1; unspecified 25.

See footnotes at end of table.

TABLE 3--Continued  
 SPAIN: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS--Continued</b>			
Other--Continued:			
Slag and dross, not metal-bearing--Continued:			
Waste, scale, dross, slag of iron or steel industry value, thousands	\$164	--	Italy \$162; Austria \$1.
Slag and ash, n.e.s., including seaweed ash (kelp)	173,823	19,800	Portugal 103,259; Algeria 25,842; Canada 13,200.
<b>MINERAL FUELS AND RELATED MATERIALS</b>			
Asphalt and bitumen, natural	14,627	--	France 8,558; Andorra 4,491; Belgium-Luxembourg 832.
Carbon black	27,131	7	France 9,081; Italy 6,668; Portugal 2,303.
Coal:			
Anthracite	13,215	--	All to France.
Bituminous	470	--	Portugal 405; Peru 25; Egypt 21.
Briquets of anthracite and bituminous coal	14	--	Egypt 9; Chile 5.
All grades including briquets	13,795	--	France 13,215; Portugal 405; Egypt 109.
Coke and semicoke	450,987	--	Germany 334,754; France 35,113; Belgium-Luxembourg 32,509.
Gas, manufactured value, thousands	\$1	--	Unspecified.
Peat including briquets and litter	2,997	--	Portugal 1,366; France 1,185; Turkey 240.
Petroleum:			
Crude 42-gallon barrels	15	--	Tunisia 7; unspecified 7.
Refinery products:			
Liquefied petroleum gas	do. 2,475	81	Morocco 976; Portugal 607; Egypt 219.
Mineral jelly and wax	do. 275,348	2,605	Portugal 54,201; Italy 36,769; France 28,765.
Asphalt	do. 3,575	77	Portugal 1,512; France 1,043; Nigeria 363.
Bituminous mixtures	do. 872,985	4,654	Nigeria 440,689; Portugal 372,757; France 24,731.
Petroleum coke	do. 452,601	110	Portugal 249,002; United Kingdom 91,933; France 32,681.
Unspecified	do. 117,063	14,447	Gibraltar 13,104; France 8,110; unspecified 39,179.

-- Zero.

1/ Table prepared by Glenn J. Wallace, International Data Unit.

2/ Less than 1/2 unit.

Source: United Nations Statistical Office (microfiche).

TABLE 4  
 SPAIN: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>METALS</b>			
Alkali and alkaline-earth metals:			
Alkali metals	26	--	Italy 10; United Kingdom 8; China 6.
Alkaline-earth metals	497	--	France 291; Russia 181; United Kingdom 10.
Aluminum:			
Ore and concentrate thousand tons	2,579	--	Guinea 2,516; China 47; Guyana 9.
Oxides and hydroxides	55,917	249	Germany 28,210; France 19,704; Netherlands 4,880.
Ash and residue	52,093	--	France 27,098; Germany 13,749; Belgium-Luxembourg 3,097.
Metal including alloys:			
Scrap	52,081	33	France 20,606; Russia 12,760; Portugal 7,438.
Unwrought	177,039	(2/)	Russia 60,480; Norway 23,665; Portugal 16,663.
Semimanufactures	176,427	1,200	Germany 40,966; France 37,185; Italy 27,401.
Antimony:			
Oxides	1,004	27	China 511; France 226; United Kingdom 111.
Metal including alloys, all forms	1,510	--	China 1,242; Netherlands 186; Japan 51.
Arsenic, metal including alloys, all forms	93	--	China 86; Netherlands 7.
Beryllium, metal including alloys, all forms	345	(2/)	Italy 83; Netherlands 59; China 41.
Bismuth, metal including alloys, all forms	250	--	Belgium-Luxembourg 172; United Kingdom 53; Netherlands 21.
Cadmium, metal including alloys, all forms	91	--	Germany 82; Netherlands 5; Italy 4.

See footnotes at end of table.

TABLE 4--Continued  
 SPAIN: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>METALS--Continued</b>			
<b>Chromium:</b>			
Ore and concentrate	3,756	--	South Africa 2,035; Turkey 1,100; Netherlands 263.
Oxides and hydroxides	4,735	(2/)	United Kingdom 2,213; Russia 1,048; Germany 634.
Metal including alloys, all forms	341	(2/)	Italy 83; Russia 81; Netherlands 59.
<b>Cobalt:</b>			
Ore and concentrate	60	--	Finland 58; United Kingdom 2.
Oxides and hydroxides	901	41	Finland 495; United Kingdom 115; Belgium-Luxembourg 86.
Metal including alloys, all forms	148	2	Belgium-Luxembourg 64; United Kingdom 31; France 19.
<b>Copper:</b>			
Ore and concentrate	935,942	--	Indonesia 649,369; Chile 131,194; Portugal 108,861.
Matte and speiss including cement copper	57	1	France 49; Portugal 4; Belgium-Luxembourg 3.
Oxides and hydroxides	1,027	210	Peru 212; United Kingdom 117; Norway 105.
Sulfate	4,522	--	Italy 1,226; France 991; Russia 832.
Ash and residue	30,429	6,407	Italy 14,329; France 3,282; Norway 2,845.
<b>Metal including alloys:</b>			
Scrap	72,145	3,292	France 16,187; Germany 9,793; United Kingdom 9,134.
Unwrought	42,178	80	Chile 25,728; Italy 7,122; France 3,812.
Semimanufactures	208,104	1,605	France 51,862; Germany 43,108; Italy 30,579.
Germanium, metal including alloys, all forms	value, thousands \$224	--	All from Belgium-Luxembourg.
<b>Gold:</b>			
Waste and sweepings	do. \$9,769	--	France \$5,640; Switzerland \$1,757; Italy \$1,135.
Metal including alloys, unwrought and partly wrought	do. \$361,478	\$2,090	United Kingdom \$238,456; Belgium-Luxembourg \$59,534; Germany \$20,625.
<b>Iron and steel:</b>			
<b>Ore and concentrate:</b>			
Including roasted pyrite	thousand tons 6,584	(2/)	Brazil 5,203; Venezuela 750; Australia 309.
Pyrite, roasted	value, thousands \$21	--	Germany \$12; Italy \$9.
<b>Metal:</b>			
Scrap	thousand tons 5,996	93	United Kingdom 1,739; France 1,233; Russia 964.
Pig iron, cast iron, related materials	937,894	834	Russia 463,410; Venezuela 198,192; Libya 42,663.
<b>Ferroalloys:</b>			
Ferrochromium	192,925	200	South Africa 119,850; Kazakhstan 17,615; Finland 14,019.
Ferromanganese	13,515	--	South Africa 3,950; Norway 3,549; France 3,159.
Ferromolybdenum	2,266	72	United Kingdom 612; Chile 605; Austria 437.
Ferronickel	32,235	--	New Caledonia 15,830; Colombia 7,909; Greece 4,402.
Ferroniobium	387	--	Brazil 202; Germany 145; Netherlands 40.
Ferrosilicochromium	5,351	--	Zimbabwe 4,817; Netherlands 500; United Kingdom 35.
Ferrosilicomanganese	25,312	5	Norway 14,886; Germany 2,500; South Africa 2,500.
Ferrosilicon	43,300	533	Norway 26,795; France 3,200; Macedonia 2,458.
Ferrotitanium and ferrosilicotitanium	561	(2/)	United Kingdom 323; Germany 162; France 53.
Ferrotungsten and ferrosilicotungsten	50	--	Netherlands 26; France 14; Belgium-Luxembourg 6.
Ferrovandium	343	--	Austria 204; Netherlands 72; Belgium-Luxembourg 34.
Silicon metal	4,913	(2/)	France 1,217; China 1,166; Norway 860.
Unspecified	11,667	62	France 4,854; China 1,631; Brazil 1,315.
Steel, primary forms	438,234	29	France 253,568; Russia 59,351; Portugal 23,476.
<b>Semimanufactures:</b>			
<b>Flat-rolled products:</b>			
<b>Of iron or nonalloy steel:</b>			
Not clad, plated, coated	thousand tons 3,530	1	France 725; Germany 619; Italy 391.
Clad, plated, coated	value, thousands \$933,275	\$3,630	France \$210,990; Germany \$209,983; United Kingdom \$99,114.
<b>Of alloy steel</b>			
Bars, rods, angles, shapes, sections	thousand tons 1,279	(2/)	United Kingdom 229; Italy 220; Germany 150.
Rails and accessories	15,592	1	United Kingdom 6,152; Poland 2,715; France 2,251.
Wire	93,207	245	Portugal 19,033; Italy 16,411; Belgium-Luxembourg 15,010.
Tubes, pipes, fittings	430,994	760	Italy 97,480; France 92,872; Germany 73,914.
<b>Lead:</b>			
Ore and concentrate	2,533	321	Ghana 1,114; Morocco 511; United Kingdom 397.
Oxides	3,967	3	Portugal 2,325; Italy 1,485; Germany 40.
Ash and residue	776	--	All from France.

See footnotes at end of table.

TABLE 4--Continued  
 SPAIN: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>METALS--Continued</b>			
Lead--Continued:			
Metal including alloys:			
Scrap	12,394	353	Morocco 3,298; Nigeria 3,200; Portugal 1,892.
Unwrought	95,983	--	Morocco 28,398; Bulgaria 17,354; France 13,442.
Semimanufactures	4,610	22	France 1,590; Netherlands 1,169; Ireland 773.
Lithium oxides and hydroxides	238	83	Germany 58; Canada 47; China 44.
Magnesium, metal including alloys:			
Unwrought	2,762	23	Norway 821; France 745; Netherlands 655.
Semimanufactures	374	--	Switzerland 119; Netherlands 73; Hungary 72.
Manganese:			
Ore and concentrate	486,951	--	South Africa 278,282; Gabon 90,624; Brazil 82,537.
Oxides	2,147	--	India 545; Australia 460; Norway 433.
Metal including alloys, all forms	5,147	(2/)	China 4,059; Germany 294; Netherlands 211.
Mercury	225	(2/)	Belgium-Luxembourg 76; Austria 75; Germany 39.
Molybdenum:			
Ore and concentrate:			
Roasted	3,085	255	Chile 2,550; Belgium-Luxembourg 180; Netherlands 100.
Unroasted	44	--	All from the United Kingdom.
Oxides and hydroxides	7	(2/)	United Kingdom 4; France 2.
Metal including alloys:			
Unwrought	23	8	France 15.
Semimanufactures	23	4	Austria 9; Germany 8; Sweden 1.
Nickel:			
Ore and concentrate	value, thousands	\$13	-- Norway \$11; Germany \$1; United Kingdom \$1.
Matte and speiss	do.	\$202	\$14 Canada \$187.
Oxides and hydroxides		149	-- Netherlands 44; Cuba 34; Italy 28.
Metal including alloys:			
Scrap		122	-- Portugal 95; Philippines 22; France 5.
Unwrought		18,222	39 South Africa 4,700; Australia 4,450; Russia 4,122.
Semimanufactures		3,582	143 Netherlands 2,404; Germany 459; Italy 171.
Platinum-group metals:			
Waste and sweepings	value, thousands	\$328	-- Italy \$232; Portugal \$91; Germany \$5.
Metal including alloys, unwrought and partly wrought:			
Palladium	do.	\$8,248	\$726 Germany \$2,255; Switzerland \$2,147; France \$2,101.
Platinum	do.	\$10,993	\$9 France \$4,664; United Kingdom \$2,607; Switzerland \$1,464.
Rhodium	do.	\$524	\$5 United Kingdom \$222; France \$153; Germany \$144.
Iridium, osmium, ruthenium	do.	\$477	-- Italy \$341; France \$55; United Kingdom \$45.
Rare-earth, metals including alloys, all forms		7	-- United Kingdom 5; Netherlands 2.
Selenium, elemental		203	-- Norway 87; United Kingdom 41; Germany 29.
Silicon, high-purity		39	-- Italy 22; Portugal 8; Ukraine 7.
Silver:			
Ore and concentrate	value, thousands	\$5,875	-- Indonesia \$4,409; Morocco \$824; Chile \$315.
Metal including alloys, unwrought and partly wrought	do.	\$88,796	\$3,574 Italy \$22; France \$19; United Kingdom \$15.
Tantalum, metal including alloys, all forms	do.	\$123	\$94 Germany \$14; United Kingdom \$5; France \$4.
Tin, metal including alloys:			
Scrap		42	4 France 38.
Unwrought		4,606	-- Bolivia 1,580; Peru 755; China 720.
Semimanufactures		740	2 France 342; United Kingdom 153; Germany 120.
Titanium:			
Ore and concentrate		124,346	-- Australia 122,395; South Africa 680; Ukraine 563.
Oxides		13,086	281 Australia 2,469; China 2,326; Saudi Arabia 2,088.
Metal including alloys, all forms		1,957	687 United Kingdom 612; Germany 346; Russia 85.
Tungsten:			
Ore and concentrate	value, thousands	\$6	-- All from Portugal.
Metal including alloys:			
Unwrought		18	1 China 12; Italy 3; France 1.
Semimanufactures		50	16 Germany 13; China 12; Italy 4.
Uranium and thorium:			
Ore and concentrate	value, thousands	\$12	\$1 United Kingdom \$9; Germany \$2.
Oxides and other compounds	do.	\$131,318	\$38,993 United Kingdom \$92,126; Italy \$199.

See footnotes at end of table.

TABLE 4--Continued  
 SPAIN: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>METALS--Continued</b>			
Uranium and thorium--Continued:			
Metal including all forms, thorium	value, thousands	\$5	\$2 Germany \$2; France \$1.
Vanadium:			
Oxides and hydroxides		49	5 United Kingdom 28; Germany 16.
Ash and residue		181	-- Germany 121; Austria 60.
Metal including alloys, all forms	value, thousands	\$3	-- All from France.
Zinc:			
Ore and concentrate		509,558	38,073 Canada 133,977; Morocco 130,069; Peru 125,645.
Oxides		37,927	23 France 10,780; China 10,598; Italy 4,488.
Blue powder		1,137	-- Belgium-Luxembourg 540; Germany 507; United Kingdom 61.
Ash and residue		10,227	21 Italy 5,025; France 2,246; Germany 1,276.
Metal including alloys:			
Scrap		2,446	-- France 1,983; Morocco 263; Ukraine 130.
Unwrought		11,320	(2/) Belgium-Luxembourg 8,064; Italy 1,586; France 856.
Semimanufactures		4,651	2 Germany 1,950; France 1,900; Belgium-Luxembourg 520.
Zirconium:			
Ore and concentrate		98,066	2,291 South Africa 50,387; Australia 39,539; Germany 2,515.
Metal including alloys, semimanufactures		22	6 Netherlands 15; Germany 1.
Other:			
Ores and concentrates		135,266	-- Australia 58,323; Germany 24,495; United Kingdom 18,000.
Oxides and hydroxides		2,650	805 Germany 1,076; United Kingdom 257; Italy 190.
Ashes and residues		102,973	6,428 France 33,421; Italy 21,809; Germany 15,146.
Base metals including alloys, all forms	value, thousands	\$112	\$2 Switzerland \$32; Belgium-Luxembourg \$24; Germany \$19.
Metalloids	do.	\$210	\$136 Japan \$70; United Kingdom \$4.
Precious metals, n.e.s.:			
Ores and concentrates	kilograms	21,258	-- Indonesia 17,927; Germany 2,800; Argentina 363.
Waste and scrap	value, thousands	\$8,248	-- France \$5,155; Switzerland \$1,757; Italy \$710.
<b>INDUSTRIAL MINERALS</b>			
Abrasives, n.e.s.:			
Natural, corundum, emery, pumice, etc.		4,275	58 Turkey 1,479; India 840; Germany 782.
Artificial:			
Corundum		14,815	79 France 6,698; Italy 2,946; Germany 2,107.
Silicon carbide		6,776	54 Venezuela 2,300; Germany 1,792; Norway 1,463.
Dust and powder of precious and semiprecious stones including diamonds	value, thousands	\$12,515	\$887 Ireland \$6,936; Belgium-Luxembourg \$1,585; Germany \$1,173.
Grinding and polishing wheels and stones		8,011	39 Italy 3,134; Germany 2,105; France 741.
Asbestos, crude		21,374	44 Russia 8,930; Canada 8,492; Zimbabwe 2,679.
Barite and witherite		25,696	5 Morocco 12,929; China 11,837; Germany 520.
Boron:			
Crude natural borates		90,859	-- Turkey 78,800; Argentina 12,006; Germany 20.
Oxides and acids		19,027	13,196 Turkey 3,000; France 1,235; Italy 1,018.
Cement	thousand tons	3,061	(2/) Turkey 950; Tunisia 402; Greece 270.
Chalk		4,532	-- France 4,287; Austria 119; United Kingdom 90.
Clays, crude:			
Bentonite		51,248	5,547 Italy 18,448; Greece 13,675; France 8,091.
Chamotte earth and dinas earth		23,907	7,194 France 9,481; Germany 3,578; Israel 3,235.
Fire clay		2,437	9 France 1,382; Portugal 928; United Kingdom 61.
Fuller's earth	value, thousands	\$17	\$12 Belgium-Luxembourg \$5.
Kaolin		585,468	12,024 United Kingdom 309,081; Ukraine 78,374; France 61,473.
Other		20,804	702 United Kingdom 9,317; Andorra 3,384; Germany 3,222.
Cryolite and chiolite		7	-- All from Portugal.
Diamond, natural:			
Gem, not set or strung	value, thousands	\$37,946	\$97 Belgium-Luxembourg \$24,396; Israel \$6,841; India \$4,702.
Industrial stones	do.	\$3,394	\$23 Belgium-Luxembourg \$1,559; South Africa \$648; Ireland \$482.
Dust and powder	do.	\$12,508	\$887 Ireland \$6,936; Belgium-Luxembourg \$1,585; Germany \$1,173.
Diatomite and other infusorial earth		5,563	2,138 France 1,960; Portugal 1,150; Georgia 140.
Feldspar		315,236	-- Turkey 199,450; France 69,469; Italy 43,951.
Fertilizer materials:			
Crude, n.e.s.		15,451	195 Italy 5,506; Israel 4,952; France 2,486.

See footnotes at end of table.

TABLE 4--Continued  
 SPAIN: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS--Continued</b>			
<b>Fertilizer materials--Continued:</b>			
Manufactured:			
Ammonia	614,066	--	Algeria 208,937; Ukraine 134,149; Nigeria 68,157.
Nitrogenous	thousand tons 1,449	(2/)	Netherlands 273; Germany 238; Belgium-Luxembourg 161.
Phosphatic	153,076	--	Tunisia 41,143; Portugal 34,466; Morocco 26,640.
Potassic	436,110	--	Canada 96,064; Israel 91,577; Jordan 79,955.
Unspecified and mixed	thousand tons 1,095	(2/)	Poland 163,249; Russia 108,997; Portugal 108,947.
Fluorspar	16,394	--	China 11,849; Mexico 4,512; France 33.
Graphite, natural	8,020	239	China 4,718; Canada 1,288; Germany 720.
Gypsum and plaster	54,802	176	Morocco 36,560; Portugal 11,425; France 5,535.
Iodine	608	450	Japan 102; Germany 20; Chile 8.
<b>Kyanite and related materials:</b>			
Mullite	755	--	Germany 460; United Kingdom 151; Hungary 119.
Unspecified	17,201	487	South Africa 15,284; France 651; Netherlands 422.
Lime	2,509	18	Portugal 1,567; Belgium-Luxembourg 503; France 172.
<b>Magnesium compounds:</b>			
Magnesite, crude	5,548	--	Italy 2,814; Canada 783; Australia 769.
Oxides and hydroxides	103,699	1,170	China 49,538; Italy 17,130; Turkey 8,458.
Other	3,132	--	Germany 2,717; China 357; Mexico 36.
<b>Mica:</b>			
Crude including splittings and waste	2,351	60	India 1,498; France 297; Austria 123.
Worked including agglomerated splittings	212	3	Belgium-Luxembourg 52; Austria 31; India 28.
Nitrates, crude	7,484	--	Chile 7,100; Belgium-Luxembourg 360; Bulgaria 24.
Phosphates, crude	thousand tons 2,105	--	Morocco 1,879; Algeria 117; Syria 87.
Phosphorus, elemental	132	--	China 116; Italy 13; Germany 3.
<b>Pigments, mineral:</b>			
Natural, crude	209	20	Austria 148; United Kingdom 36; Italy 3.
Iron oxides and hydroxides, processed	20,006	62	China 8,787; Germany 8,454; France 1,046.
<b>Precious and semiprecious stones other than diamond:</b>			
Natural	value, thousands \$6,850	\$225	Thailand \$2,075; India \$1,154; Colombia \$696.
Synthetic	do. \$7,425	\$16	Belgium-Luxembourg \$3,525; Austria \$1,249; Switzerland \$1,213.
Pyrite, unroasted	188	--	Italy 111; Austria 72; Germany 4.
Quartz crystal, piezoelectric	value, thousands \$1,911	--	Japan \$1,509; France \$157; Belgium-Luxembourg \$98.
Salt and brine	37,542	1	Italy 15,151; Algeria 7,857; France 7,744.
<b>Sodium compounds, n.e.s.:</b>			
Soda ash, manufactured	206,684	83,396	Turkey 53,373; Bulgaria 21,350; Romania 21,102.
Sulfate, manufactured	27	--	Germany 22; Italy 3; Belgium-Luxembourg 1.
<b>Stone, sand and gravel:</b>			
Dimension stone:			
Crude and partly worked	573,835	5,571	Portugal 149,222; Brazil 141,619; South Africa 72,227.
Worked	137,502	73	Italy 68,435; Portugal 33,687; Finland 8,124.
Dolomite, chiefly refractory-grade	3,728	1	Belgium-Luxembourg 1,196; France 1,051; Norway 520.
Gravel and crushed rock	316,794	--	Morocco 263,732; France 27,145; Portugal 14,080.
Limestone other than dimension	4	--	All from Belgium-Luxembourg.
Quartz and quartzite	3,196	362	France 875; India 675; Germany 580.
Sand other than metal-bearing	839,841	89	Morocco 711,601; France 93,061; South Africa 15,506.
<b>Sulfur:</b>			
Elemental:			
Crude including native and byproduct	45,618	(2/)	France 45,064; Belgium-Luxembourg 221; India 156.
Colloidal, precipitated, sublimed	174	--	France 138; Germany 13; United Kingdom 12.
Dioxide	9,240	--	Italy 5,312; Sweden 2,849; Germany 660.
Sulfuric acid	137,168	5	Greece 65,263; Italy 54,999; France 11,403.
Talc, steatite, soapstone, pyrophyllite	49,177	486	France 32,716; China 7,991; Egypt 2,095.
Vermiculite, perlite, chlorite	44,243	21	Greece 18,387; Turkey 11,808; South Africa 5,824.
<b>Other:</b>			
Crude	510,401	2,049	Andorra 464,038; Germany 18,522; Italy 6,539.
Slag and dross, not metal-bearing:			
Granulated slag (slag sand) from iron and steel industry	31,304	--	United Kingdom 18,000; France 9,103; Belgium-Luxembourg 4,192.
Waste, scale, dross, slag of iron or steel industry	103,962	--	Australia 58,323; Germany 24,495; Denmark 8,746.
Slag and ash, n.e.s., including seaweed ash (kelp)	2,468	--	France 1,727; United Kingdom 329; Germany 253.

See footnotes at end of table.

TABLE 4--Continued  
 SPAIN: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>MINERAL FUELS AND RELATED MATERIALS</b>			
Asphalt and bitumen, natural	6,951	625	Portugal 6,043; United Kingdom 157; Mexico 63.
Carbon black	89,419	2,115	France 26,516; Portugal 17,382; Thailand 10,746.
Coal:			
Anthracite	281,363	--	South Africa 141,303; United Kingdom 64,183; Netherlands 46,946.
Bituminous	thousand tons 6,756	2,186	South Africa 2,027; Australia 1,243; Venezuela 360.
Briquets of anthracite and bituminous coal	18	--	Germany 13; Netherlands 5.
Lignite including briquets	22	--	All from Germany.
All grades including briquets	thousand tons 14,546	2,965	South Africa 5,532; Indonesia 3,077; Australia 1,243.
Coke and semicoke	93,702	10,262	China 20,024; Portugal 18,854; Zimbabwe 12,094.
Gas, manufactured	value, thousands \$31	--	Italy \$17; Netherlands \$14.
Gas, natural:			
Gaseous	thousand tons 5,737	--	Algeria 4,057; Norway 1,342; Morocco 333.
Liquefied	do. 4,667	--	Algeria 3,075; Libya 700; United Arab Emirates 511.
Peat including briquets and litter	151,303	598	Germany 80,358; Estonia 23,973; Netherlands 11,970.
Petroleum:			
Crude	thousand 42-gallon barrels --	--	Saudi Arabia 71,450; Nigeria 64,515; Libya 50,810.
Refinery products:			
Liquefied petroleum gas	do. 1,207	(2/)	Algeria 437; United Kingdom 337; Saudi Arabia 113.
Mineral jelly and wax	42-gallon barrels 278,189	4,439	China 103,435; France 69,547; Portugal 25,160.
Asphalt	thousand 42-gallon barrels 1,352	--	France 510; Portugal 397; Belgium-Luxembourg 313.
Bitumen and other residues	do. 2,054	354	France 640; Portugal 425; United Kingdom 175.
Bituminous mixtures	42-gallon barrels 8,108	--	France 5,696; Germany 1,309; United Kingdom 339.
Petroleum coke	thousand 42-gallon barrels 15,514	13,372	United Kingdom 956; Venezuela 820; Aruba 245.
Unspecified	do. 7,003	48	Italy 2,141; Algeria 1,102; Russia 947.

-- Zero.

1/ Table prepared by Glenn J. Wallace, International Data Unit.

2/ Less than 1/2 unit.

Source: United Nations Statistical Office (microfiche).

TABLE 5  
 SPAIN: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina	Alumina Española S.A. (Alcoa Inespal S.A.)	Alumina plant at San Ciprián, Lugo	1,000
Aluminum	Aluminio Español S.A. (Alcoa Inespal S.A.)	Electrolytic plant at San Ciprián, Lugo	180
Do.	Industria Española del Aluminio, S.A. (Alcoa Inespal)	Electrolytic plant at Avilés	100
Do.	do.	Electrolytic plant at La Coruña	25
Aluminum, secondary	Remetal S.A.	Plant at Valcritec	60
Coal:			
Anthracite	Antracitas Gaiztarro S.A.	Mines at María and Paulina	2,000
Do.	Antracitas de Gillón S.A.	Mines near Oviedo	2,000
Do.	Antracitas del Bierzo S.A.	Mines near León	1,000
Bituminous	Hulleras del Norte S.A. (Hunosa)	Various mines and plant	3,300
Do.	Hulleras Vasco Leonesa S.A.	Santa Lucia Mine, Leon	2,000
Do.	Minas de Figaredo S.A.	Mines near Oviedo	1,000
Do.	Nacional de Carbon del Sur (Encasur)	Rampa 3 and San Jose Mines, Cordoba	200
Lignite	Empresa Nacional de Electricidad (Endesa)	As Pontes Mine, and Andorra Mine, La Coruña	15,000
Barite	Minas de Baritina S.A. (Kali-Chemie of Germany, 100%)	Mine and plant in Espiel area, Córdoba	50
Cement	Approximately 36 cement companies, of which the largest is Asland S.A.	54 plants, including 5 (Asland) plants, of which the largest ones are plants at Puerto de Sagunto, Valencia, and Villaluenga de la Sagra, Toledo	44,000 (6,000) 2,000 2,000

TABLE 5--Continued  
 SPAIN: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
<b>Copper:</b>			
Metal	Atlantic Copper Holding S.A. (Freeport MacMoran Inc., 65%; Ercros Group, 35%)	Refinery at Huelva	270
Do.	do.	Electrolytic refinery at Huelva	105
Do.	Industrias Reunidas de Cobre	Smelter at Asua-Bilbao	30
Do.	Electrolítico y Metales S.A.	Fire and electrolytic refinery at Asua-Bilboa	36
Ore, metal content	Atlantic Copper Holding, S.A. (Freeport MacMoran, Inc., 65%, Ercros Group, 35%)	Mines and plant at Ariertero, near Santiago de Compostela; Corta Atalay open pit mine, Cerro Colorado open pit mine, and Alfredo underground mine, in Rio Tinto area	12 30
Do.	Navan Resources (Almagrera) Ltd.	Migolas and Sotiel areas	6
Fluorspar, ore	Fluoruros S.A. (Bethelhem Steel Corp., 49%)	Plant at Caravía, near Colunga	400
Do.	do.	Opencast mines at San Lino and Val Negro and underground mine at Eduardo, near Carav--all in Asturias	350
Do.	do.	Plant at Collada, Gijón. Mines at Veneros Sur and Corona, Gijón	200
Gold kilograms	Rio Narcea Gold Mines Ltd.	Belmonte de Miranda, Asturias	3,750
Iron ore	Compañía Andaluza de Minas S.A. (Mokta, 62%)	Mine at Alquife, Granada (closed--maintenance status)	4,000
<b>Lead:</b>			
Metal	Sociedad Minera y Metalúrgica de Peñarroya de de España, S.A. (Peñarroya, France, 98%)	Smelter at Cartagena, Murcia Refinery at Cartagena, Murcia	60 60
Do.	Compañía La Cruz, Minas y Fundaciones de Plomo S.A.	Smelter at Lineares, Jaén Refinery at Lineares, Jaén	40 40
Do.	Tudor S.A.	Secondary smelter at Saragoza	16
Do.	Ferroaleaciones Españolas, S.A.	Secondary smelter at Medina del Campo	12
Do.	Derivados de Minerales y Metales	Secondary smelter at Barcelona	5
Ore	Sociedad Minera y Metalúrgica de Peñarroya España S.A. (Peñarroya, France 90%)	Opencast mine at Montos de Los Azules, near Unión Murcia	25
Do.	Andaluza de Piritas S.A. (APIRSA)	Opencast mine at Aznalcóllar, Sevilla	21
Do.	Exploración Minera Internacional España S.A. (EXMINESA)	Underground mine at Rubiales, Lugo	16
Magnesite	Magnesitas de Rubián S.A.	Plants at Zubiri	100
Do.	do.	Mines and plant near Sarria, south of Lugo	220
Mercury flasks	Minas de Almadén y Arrayanes S.A. (Government, 100%)	Mines and smelter at Almadén	70,000
<b>Petroleum:</b>			
Crude barrels per day	Chevron S.A.	Oilfield at Casablanca	300
Refined do.	Repsol S.A.	Refineries at Escombreras	200,000
Do. do.	do.	Puertollano	14,000
Do. do.	do.	Tarragona	260,000
Do. do.	Refinería de Petróleos del Norte S.A. (Petronor)	Refinery at Somorrostro	240,000
Do. do.	Compañía Española de Petróleos S.A. (Cepsa)	Refinery at Santa Cruz de Tenerife	160,000
Do. do.	Petroleos del Mediterraneo S.A. (Petromed)	Refinery at Castellón de la Plana	120,000
Do. do.	Compañía Iberica Refinadora de Petróleos S.A. (Petroiber)	Refinery at La Coruña	140,000
Potash, ore	Iberpotash S.A. (Dead Sea Works Ltd., 60%; La Seda de Barcelona S.A., 20%; Tolsa S.A., 20%)	Mines and plants at Suria, near Barcelona	850
Pyrite	Compañía Española de Minas de Tharsis	Mines and plants at Tharsis and Zarza, near Seville	1,300
Do.	do.	Plant at Huelva	600
Do.	Rio Tinto Minera S.A. Unión Explosivos (Rio Tinto plc., 75%; Rio Tinto Zinc, 25%)	Mines and plant at Rio Tinto, near Seville	900
Sepiolite	Tolsa S.A.	Mine and plant at Vicalvaro, near Madrid	100
Do.	Silicatos-Anglo-Ingleses S.A.	Mine and plant at Villecas near Madrid	200
Sodium sulfate	Crimidesa S.A.	Mine and plant at Cerezo de Rio, Burgos	600
Steel	Aceralia Corporación Siderúrgica (Arbed S.A., 35%) Empresa Nacional del Uranio (Enusa), (Government, 100%)	Plants at Avilés, Gijon, Sagunto, and Sestao; mines and plant near Ciudad Real	8,000
Uranium, U <sub>3</sub> O <sub>8</sub> metric tons	do.	do.	500
<b>Zinc:</b>			
Metal	Asturiana de Zinc S.A. (Azsa), (Glencore International AG, 44%)	Electrolytic zinc plant at San Juan de Nieva	320
Ore	do.	Reocin mines and plants near Torrelavega, Santander	500
Do.	Andaluza de Piritas S.A. (APIRSA) (Boliden Ltd., 100%)	Open pit mine at Aznalcóllar, Seville	3,500
Do.	Exploración Minera Internacional España S.A. (EXMINESA)	Underground mine at Rubiales, Lugo	500
Do.	Sociedad Minera y Metalúrgica de Penarroya-Espana S.A.	Mines and plants at Montos de los Azules y Sierra de Lujar, San Agustin	200